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ABSTRACT

The emphasis on and the importance of evaluation have been addressed by program planners for the past 60 years. Evaluation strategies have broadened from the Tylerian approach, which focuses on specific objectives, to more investigation using indicators as measures of program success. Evaluation is important during the development of a program and also at its conclusion. The seven phases of program planning include three evaluation phases. They are (1) formative evaluation (collecting and sharing information for program improvement); (2) summative evaluation (judging how effective the program has been and how well program goals have been met); and (3) impact evaluation (determining the impact on the larger community over a longer period of time). The major consideration of the formative evaluation phase is who is going to do it. Quality is of utmost importance. Summative evaluation tells what participants learned, how well resource people performed, how good facilities were, how well participants' expectations have been met, how appropriate the program was, what administrative problems there were, and how other programs can be improved. The high costs of impact evaluation should be weighed against the benefit before such an evaluation is designed. (YLB)

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The Three Phases of Program Evaluation

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The Three Phases of Program Evaluation

I hear and I forget
I see and I remember
I do and I understand

— Chinese Proverb

Why Evaluate?

No adult educator would deny the importance of evaluation. Indeed, evaluation has long been accepted as a standard part of program planning. Unfortunately, evaluation much like going on a diet, is often more resolution than action and is often not implemented even though the importance is fully recognized. So why don't we spend more time and money on evaluation? The answer to this question is complex. Often the pressures of time and money militate conducting systematic evaluations. Other priorities such as program development and delivery tend to supersede the resources allocated to evaluation. This may be changing. The press for accountability, threatened (and actual) reductions in program funding and an increase by professionals as to the usefulness of services and programs has put a greater emphasis on the need for program evaluation. Administrators, participants, funding agencies and the general public (taxpayers!) are now becoming very conscious of the costs associated with extension programs. While they don't argue the importance of these programs they are concerned about the impact on society. Clearly the attitude is one of cost effectiveness or to use an overused term — "What is the bottom line?"

Historical Developments in Evaluation

Program evaluation is not a new phenomenon. Undoubtedly some form of evaluation has been associated with every "plan" that has been implemented by those who attempt change. The need for training and the subsequent development of adult education programming after World War II brought on a more systematic approach to program planning and evaluation. Brookfield (1986) outlines several formal evaluative approaches that have evolved during the past fifty years. One of the most influential writers in the field of evaluating adult learning is Ralph Tyler (1949). His **Predetermined Objectives Approach** is still practised by many evaluators. He wrote that "the process of evaluation is essentially the process of determining to what extent the educational objectives are actually be realized — — — since educational objectives are essentially changes in human beings — — — then evaluation is the process for determining the degree to which these changes in behavior are actually taking place." Tyler's influence on evaluation remains strong. Basically it is a quantitative approach based on the ability to measure predetermined behavior based on a systematic, formal, precise and logical way.

While it is an effective way to measure change under controlled circumstances, it is a difficult model to use when attempting to determine causal changes in a society.

Goal-Free Evaluation model is the second model that followed. This model was developed by Micheal Scriven (1972). He is credited with formulating the frequently cited distinction between formative (ongoing) and summative (final) evaluation procedures. His research was conducted during the 1960s when the learner centred approach to learning became widely accepted.

GoalFree Evaluation focuses on outcomes that are positive and does not focus on predetermined goals. This type of evaluation concentrates on determining desirable outcomes. Success is based on qualitative analysis based on observation and predetermined standards. This is directly in accordance with a democratic, learner-centred approach. Scriven's response to the Tylerian approach was to abandon official declarations of program purpose and to concentrate on recording as accurately as possible all program outputs.

Stufflebeam (1971) proposed an overall model of evaluation — the **CIPP** model — in which attention is given to studying the **C**ontext of the program, **I**nput into the program, **P**rocess within the program and the programs **P**roduct. This model emphasizes the importance of all aspects of program planning from needs assessment, program development and delivery and social impact. It relies on the consultation with participants.

The Kirkpatrick **Hierarchy of Evaluation** is a similar model to CIPP. It does differ in that it places a great deal of emphasis on the final impact of a program on the community. Put briefly, the Kirkpatrick hierarchy has four levels of evaluation. The first is the reaction by participants, the second involves the learning that has occurred, the third is the behavioral change that has taken place and finally the fourth is the impact that has taken place on the wider community. This model of evaluation is particularly suitable for evaluating community education programs or major changes in agricultural or consumer practices.

The final general approach to evaluation was developed by Egon Guba (1978). His model **Natural Evaluation** takes into account participants definitions of key concerns and issues. It seeks to use language and modes of presenting findings that are accessible to those being evaluated. This form of evaluation advocates the use of qualitative rather than quantitative modes of data collection.

Brookfield suggests that with some adaptations these models of evaluation might well be used to evaluate program impact. It is important to note that evaluators have moved from the scientific, controlled evaluation procedures to a more community impact evaluation of the Kirkpatrick hierarchy.

Evaluation Problems

Regardless of the model of evaluation being used there are problems relating to the process. The most common reason given for not doing an evaluation is the lack of training by extension workers. This is not surprising since few individuals who become extension workers have had any training in evaluation. There are few opportunities in post secondary institutions to enroll in courses which provide practical evaluation training. A second reason is that an evaluation takes time. Too often program planners are so busy developing and delivering programs that they don't take time to do a proper evaluation. Part of the problem may be related to the first issue in that those who don't know how to carry out an evaluation are less likely to set aside time for evaluation. The third reason for not conducting evaluations is lack of funds. Proper evaluations require extra funds. Often these dollars are channelled into new programs. This may be false economy! Finally many programs are not evaluated because of the political sensitivity which may be detrimental to the health of the program! There are times when it is better to believe that programs are good rather than to know the truth. This may be acceptable when funding is sufficient but as accountability becomes more and more of a factor, all programs will have to be justified.

The Phases of Program Planning

Phase I Needs Assessment

The first phase is needs assessment during which a program's goals are determined. Many volumes have been written relating to identifying needs. As this paper relates specifically to evaluation the author will not pursue this any further other than to point out that good need assessment techniques are essential for any program.

Phase II Program Development

During this phase program goals are established. Following this potential audience resources, delivery methods, location, timing, funding and administration are all pulled together and the tentative final program is drawn up to be evaluated. It is important that the detailed process for evaluation be determined during this phase.

Phase III Formative Evaluation

Formative evaluation requires collecting and sharing information for program improvement.

The steps for formative evaluation are as follows:

1. Identify a small representative sample of the intended participants. This sample is used to check a number of things relating to the developed program. This sample may come from a commodity group, an advocate group, by expressed interest of individuals or by a simple random sample method.

2. Review the needs that have been determined with the group. This will likely require direct contact. Find out from them if they believe that the program goals and objectives are in fact correct and complete and in unison with the needs identified.

3. Review the tentative program to determine suitability of resources, times, dates, places, etc. This will provide feedback as to any possible conflicts or gaps in the program. It usually uncovers other resources as well.

4. Carefully record each recommended change and the reasons given.

5. Prepare a final formative evaluation report to be discussed at the revision meeting by the planning committee.

Phase IV Program Revision

During the program revision phase all recommendations need to be considered and necessary changes made. If major changes have been recommended it may be necessary to repeat Phases II, III and IV.

Phase V Program Delivery

Once the program has been finalized, delivery follows. At this point it must be clear as to how the next phase will be accomplished. It is essential that pre-planning take place to prepare for evaluation.

Phase VI Summative Evaluation

This phase is important to judge how effective the program has been. Generally summative evaluations occur at the conclusion or shortly after the program has finished. The purpose of summative evaluation is to determine how well program goals have been met. The following is a sequence to be followed for summative evaluation:

1. Decide what is to be measured. This will require a review of the program goals.

2. Select an appropriate method and develop the required instrument. It may be a questionnaire, a set of interview questions, a reaction sheet or whatever method is both convenient and appropriate.

3. Decide on the appropriate time and place to administer the test.

4. Test the instrument in advance to make sure it measures what is intended and that the questions are clear. Also check for spelling and grammatical errors.

5. Determine how to analyze the data once it is collected.

6. Obtain needed resources such as computer time, extra help, paper, pencils, etc.

7. Administer the evaluation.

8. Analyze the results.

9. Prepare a report for the program committee.

Summative evaluations tend to be more structured and more formal than formative evaluations. They are useful to determine program achievement but are not usually suitable for program impact determination.

Phase VII Impact Evaluation

Impact evaluation refers to the impact on the larger community. Such evaluation is done over a longer period of time. Courtenay and Holt (1987) suggest several considerations for impact evaluation.

1. Planners should have a definite understanding of the characteristics of participants. This is important because of the nature of change. Participants must be able to use the information obtained in the program to cause change. The program must empower the learner to enable changes to occur.

2. Planners must build a "learning transfer" or change segment into the program. If program developers desire that program content be transferred from the program site to a post-program setting, they should consider designing a specific program component for directing such application. This emphasis of this aspect is to develop an expectation that what is learned in the educational experience can be applied by the participant.

3. A third aspect of program development is to use a variety of methods. Research on impact studies points to a need to provide a greater variety of teaching methods. Grabowski (1983) provides a summary rational for

offering practice in an educational experience. "Provide learners with continuing opportunities for practice and feedback, thereby enabling them to improve performance beyond specific educational activities - - - Include opportunities to develop and practice strategies that alternate between new ideas (theory, knowledge, and skills) and action tasks (actual performance) in educational programs."

4. A fourth aspect necessary in the program development process involves follow up supervised instruction and encouragement. It is advantageous for programmers to advise participants during a program that they intend to periodically contact them to help in their implementations of change.

5. Program impact is also enhanced by matching time frames to volume of program content. Programs must be meaningful, relevant and applicable. The participant must be able to use the information in the immediate future if change is to come about.

6. A sixth aspect for building program impact is to assess the availability of materials, products or equipment to implement new skills in the work setting so that change can occur. With continuous development of new technology, it is important to plan programs in which new equipment and techniques can be utilized.

7. The final aspect for promoting program impact is to find trained observers for follow up evaluations. This, while expensive, adds greatly to the quality of the impact data.

Impact evaluations tend to be less formal and more qualitative than in the summative evaluation process. When dealing with change it is much more difficult to identify specific causal factors which have caused the changes to occur. This is really not a concern for impact evaluators. Desired change is the ultimate concern. There are however some steps which should be followed when conducting an impact evaluation. They include:

1. Clearly define the indicators which reflect change. An example would be: From observation a considerable number of farmers have adopted a certain practice which is greatly improving soil conservation. This example shows qualitative evaluation but only general quantitative evaluation. Quantitative results can be obtained if need be but the cost is greatly increased.

2. Determine acceptable procedures for getting information. These might include questionnaires, interviews, observation by trained recruits, documentary records or statistics from the census.

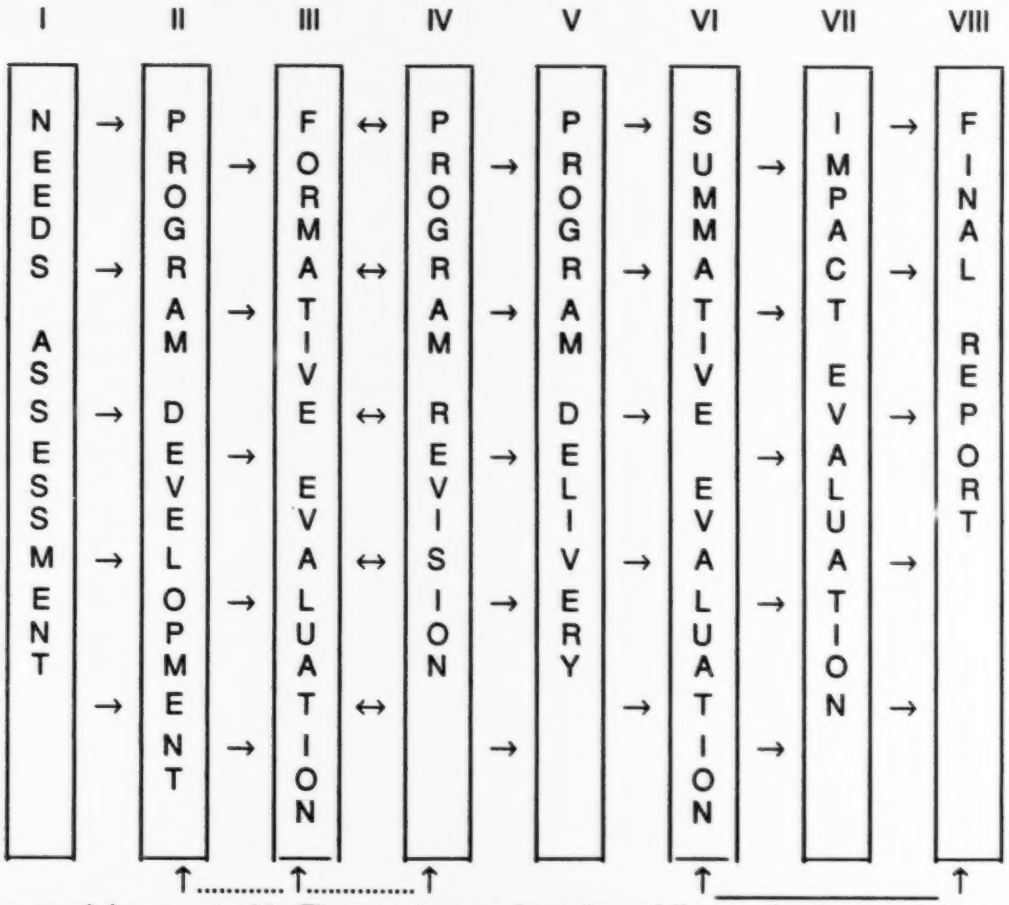
3. Develop the chosen procedure and test to determine reliability.

4. Conduct the evaluation and analyze the results.

5. Prepare the final report.

Impact evaluations require a greater time period and are much more costly. They may however become much more of a reality in this era of accountability.

Figure 1 The Phases of Program Planning



The model presented in Figure 1 is an adaptation of the evaluation model developed at the Center for Study of Evaluation (CSE) at the University of California (SAGE).

Considerations For Each Evaluation Phase

A. Formative Evaluation — Phase III

The major consideration in this phase is who is going to do it. Any program that is worth offering is worth offering it in the best possible way. Quality is of utmost importance.

B. Summative Evaluation — Phase IV

Because a summative evaluation is more costly and more time consuming, some questions should be addressed at the outset during program delivery. Summative evaluation can tell us the following:

1. What participants have learned (information skills, etc.).
2. How well the resource people performed.
3. How good the facilities were for a learning climate.
4. What the participants intend to do as a result of being in the program.
5. How well the expectation of the participants have been met.
6. How appropriate the program was with regard to timing, individual circumstances, etc.
7. Problems of administration such as fees, location, etc.

Given that we can get this information we should determine the following? Can we learn from our mistakes to improve other programs? We should ask:

1. Will any of this information be useful for future programming? Can we learn from our mistakes to improve other programs?
2. Is it a requirement for funding received? Often this is a requirement.
3. Is it useful for needs assessment? We may gain information relating to new programs.
4. Do we want to collect demographic data to help in program decisions? Are we reaching those to whom we wish to direct our programs?
5. What is our cost/benefit ratio? Did we make a profit? This might be important for financial balance.
6. Will the program be repeated? If not, why bother to evaluate.

C. Impact Evaluation — Phase VII

Impact evaluation is very costly and very time consuming given the complexity of such a design. The value of such evaluation must be carefully weighed against the benefit. Some questions to ask are:

1. Can the necessary resources be assured? These would include funding and personnel need for the evaluation.

2. Is the study/evaluation a requirement of the sponsors and/or funders? If so, this must be built into the program design in the initial planning stages. Too often "gold plated" programs have been delivered and then evaluated with a "tin cup."

3. Is impact evaluation feasible? Can program impact be determined?

4. Is an impact evaluation important for future creditability. Often additional funds hinge on past successes. "One cannot afford not to do impact evaluation!"

It is important to address these questions before designing an evaluation strategy to avoid costly effort and misuse of resources.

Summary

The emphasis on and the importance of evaluation has been addressed by program planners for the past sixty years. Evaluation strategies have broadened from the Tylerian approach which focuses on specific objectives to more investigation using indicators as measures for program success. Much of this change in emphasis is due to the need for a determining the impact of a program on the participants which in turn leads to desired changes in society.

Evaluation is important during the developing of a program and also at its conclusion. As more and more funds are allocated to specific programs from various sources, expectations for results will be high. If deliverers of programs cannot substantiate the success of their programs, the likelihood of successive funding will be greatly diminished.

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